```
=> d his

     (FILE 'HOME' ENTERED AT 10:16:01 ON 16 MAY 2003)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, SCISEARCH, CANCERLIT, TOXCENTER'
     ENTERED AT 10:16:23 ON 16 MAY 2003
L1          1743 S HEPARANASE
L2             0 S L1 AND PARALOG
L3           182 S L1 AND HUMAN HEPARANASE
L4             2 S L3 AND (SPLICE VARIANT OR PARALOG)
L5             2 DUP REM L4 (0 DUPLICATES REMOVED)

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=> dup rem l4
PROCESSING COMPLETED FOR L4
L5             2 DUP REM L4 (0 DUPLICATES REMOVED)

=> d l5 ibib ab 1-2

L5   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:51645  CAPLUS
DOCUMENT NUMBER:          136:97379
TITLE:                    Protein and cDNA sequences of a second human
                          heparanase, and splice
                          variants thereof, with a predominant
                          expression in skeletal muscle, heart and pancreas
INVENTOR(S):              David, Guido; Duerr, Joachim
PATENT ASSIGNEE(S):       Vlaams Interuniversitair Instituut voor Biotechnologie
                          Vzw, Belg.
SOURCE:                   PCT Int. Appl., 54 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2002004645      A2   20020117       WO 2001-EP8094   20010712
     WO 2002004645      A3   20021017
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
             UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                    EP 2000-202442   A  20000712
AB   The present invention provides a novel human protein and its splicing
     variants, which has heparanase activity. The present invention
     relates to the field of carbohydrates and more specifically to the field
     of heparan sulfate proteoglycans. Several splice
     variants of said gene have been identified with a specific
     expression pattern in skeletal muscle, heart and pancreas.

L5   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2001:472900  CAPLUS
DOCUMENT NUMBER:          135:73335
TITLE:                    A human heparanase sequence
                          homolog and splice variants and
                          their possible therapeutic use in the control of
                          invasive cell proliferation
INVENTOR(S):              Mckenzie, Edward Alexander; Stamps, Alasdair Craig;
                          Terrett, Jonathan Alexander; Tyson, Kerry Louise
PATENT ASSIGNEE(S):       Oxford Glycosciences (Uk) Ltd., UK
SOURCE:                   PCT Int. Appl., 97 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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WO 2001046392 A2 20010628 WO 2000-GB4963 20001221
WO 2001046392 A3 20011206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1240313 A2 20020918 EP 2000-985677 20001221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2003083254 A1 20030501 US 2002-177245 20020621
PRIORITY APPLN. INFO.: GB 1999-30392 A 19991222
GB 2000-8713 A 20000407
WO 2000-GB4963 W 20001221

AB A human sequence homolog of **heparanase** and a no. of variants that can arise from alternative splicing are described. The protein may play a role in the control of heparan-dependent invasive cell growth in a no. of pathologies and may therefore be a target for therapeutics. Identification of an EST for a **heparanase** homolog in a com. sequence database, PCR cloning of a cDNA and anal. of tissue distribution of the mRNA are reported.

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=> d his

     (FILE 'HOME' ENTERED AT 09:39:05 ON 16 MAY 2003)

     INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
     BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
     CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
     DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 09:39:21 ON
     16 MAY 2003
                SEA (HUMAN HEPARANASE II OR HUMAN HEPARANASE-2 OR HNHP1)
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               1   FILE BIOTECHABS
               1   FILE BIOTECHDS
               3   FILE CAPLUS
              63   FILE DGENE
               1   FILE IFIPAT
               1   FILE USPATFULL
L1              QUE (HUMAN HEPARANASE II OR HUMAN HEPARANASE-2 OR HNHP1)
               ---------

     FILE 'DGENE, CAPLUS, BIOTECHDS, IFIPAT, USPATFULL, ADISCTI, ADISINSIGHT,
     ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS,
     BIOTECHNO' ENTERED AT 09:43:21 ON 16 MAY 2003
L2           69 S L1
L3           68 DUP REM L2 (1 DUPLICATE REMOVED)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, SCISEARCH, CANCERLIT' ENTERED AT
     09:45:52 ON 16 MAY 2003
L4         1601 S HEPARANASE
L5          174 S (HUMAN HEPARANASE)
L6            4 S (HEPARANASE-2 OR HEPASRANASE II)
L7            2 S L5 AND (HEPARANASE-2 OR HEPASRANASE II)
L8           10 S L5 AND (VARIANT OR MUTANT OR SPLICE VARIANT)
L9            5 DUP REM L8 (5 DUPLICATES REMOVED)
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=> d l9 ibib ab 1-5

L9 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:51645 CAPLUS
DOCUMENT NUMBER: 136:97379
TITLE: Protein and cDNA sequences of a second **human heparanase**, and **splice variants** thereof, with a predominant expression in skeletal muscle, heart and pancreas
INVENTOR(S): David, Guido; Duerr, Joachim
PATENT ASSIGNEE(S): Vlaams Interuniversitair Instituut voor Biotechnologie Vzw, Belg.
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004645	A2	20020117	WO 2001-EP8094	20010712
WO 2002004645	A3	20021017		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: EP 2000-202442 A 20000712
AB The present invention provides a novel human protein and its splicing **variants**, which has heparanase activity. The present invention relates to the field of carbohydrates and more specifically to the field of heparan sulfate proteoglycans. Several **splice variants** of said gene have been identified with a specific expression pattern in skeletal muscle, heart and pancreas.

L9 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:472900 CAPLUS
DOCUMENT NUMBER: 135:73335
TITLE: A **human heparanase** sequence homolog and **splice variants** and their possible therapeutic use in the control of invasive cell proliferation
INVENTOR(S): Mckenzie, Edward Alexander; Stamps, Alasdair Craig; Terrett, Jonathan Alexander; Tyson, Kerry Louise
PATENT ASSIGNEE(S): Oxford Glycosciences (Uk) Ltd., UK
SOURCE: PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001046392	A2	20010628	WO 2000-GB4963	20001221
WO 2001046392	A3	20011206		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,

HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1240313 A2 20020918 EP 2000-985677 20001221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2003083254 A1 20030501 US 2002-177245 20020621

PRIORITY APPLN. INFO.: GB 1999-30392 A 19991222
GB 2000-8713 A 20000407
WO 2000-GB4963 W 20001221

AB A human sequence homolog of heparanase and a no. of **variants** that can arise from alternative splicing are described. The protein may play a role in the control of heparan-dependent invasive cell growth in a no. of pathologies and may therefore be a target for therapeutics. Identification of an EST for a heparanase homolog in a com. sequence database, PCR cloning of a cDNA and anal. of tissue distribution of the mRNA are reported.

L9 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:12473 CAPLUS
DOCUMENT NUMBER: 134:96257
TITLE: Protein and cDNA sequences of a novel **human heparanase** gene hnhp1 and its splicing **variants**
INVENTOR(S): Pecker, Iris; Michal, Israel; Itzhaki, Hanan
PATENT ASSIGNEE(S): Insight Strategy & Marketing Ltd., Israel
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000643	A2	20010104	WO 2000-IL358	20000619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1212341	A1	20020612	EP 2000-937164	20000619
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003503070	T2	20030128	JP 2001-507050	20000619
~~NO 2001005526~~	~~A~~	~~20011218~~	~~NO 2001-5526~~	~~20011112~~

PRIORITY APPLN. INFO.: US 1999-140801P P 19990625
WO 2000-IL358 W 20000619

AB The invention provides protein and cDNA sequences of a novel **human heparanase** gene hnhp1 and two **variants** resulted from alternative splicing. The longest clone is 2060 nucleotide long and it contains an open reading frame of 1776 nucleotides, which encodes a polypeptide of 592 amino acids, with a calcd. mol. wt. of 66.5 kDa. The two shorter forms contain an in frame deletion as a result of alternative splicing, one is 162 nucleotides (nt473-634) corresponding to amino acids 150-203, and one is 336 nucleotides (nt473-808) corresponding to amino

acids 150-261. The hnhp1 gene is mapped to chromosome 10, next to the marker SHGC-57721. The tissue distribution of hnhp1 transcripts is detd. The invention also relates to constructing hnhp1 gene expression vector to produce recombinant proteins in mammalian cells, which may have heparanase or other glycosyl hydrolase activity, its antibodies, and antisense oligonucleotide and ribozymes for gene modulation and therapeutic use.
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER: 2001:50122 BIOSIS
DOCUMENT NUMBER: PREV200100050122
TITLE: Identification of active-site residues of the pro-metastatic endoglycosidase heparanase.
AUTHOR(S): Hulett, Mark D.; Hornby, June R.; Ohms, Stephen J.; Zuegg, Johannes; Freeman, Craig; Gready, Jill E.; Parish, Christopher R. (1)
CORPORATE SOURCE: (1) Division of Immunology and Cell Biology, John Curtin School of Medical Research, Australian National University, Canberra, ACT, 2601: Christopher.Parish@anu.edu.au Australia
SOURCE: Biochemistry, (December 26, 2000) Vol. 39, No. 51, pp. 15659-15667. print.
ISSN: 0006-2960.
DOCUMENT TYPE: General Review
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Heparanase is a beta-D-endoglucuronidase that cleaves heparan sulfate (HS) and has been implicated in many important physiological and pathological processes, including tumor cell metastasis, angiogenesis, and leukocyte migration. We report herein the identification of active-site residues of **human heparanase**. Using PSI-BLAST and PHI-BLAST searches of sequence databases, similarities were identified between heparanase and members of several of the glycosyl hydrolase families (10, 39, and 51) from glycosyl hydrolase clan A (GH-A), including strong local identities to regions containing the critical active-site catalytic proton donor and nucleophile residues that are conserved in this clan of enzymes. Furthermore, secondary structure predictions suggested that heparanase is likely to contain an (alpha/beta)8 TIM-barrel fold, which is common to the GH-A families. On the basis of sequence alignments with a number of glycosyl hydrolases from GH-A, Glu225 and Glu343 of **human heparanase** were identified as the likely proton donor and nucleophile residues, respectively. The substitution of these residues with alanine and the subsequent expression of the **mutant** heparanases in COS-7 cells demonstrated that the HS-degrading capacity of both was abolished. In contrast, the alanine substitution of two other glutamic acid residues (Glu378 and Glu396), both predicted to be outside the active site, did not affect heparanase activity. These data suggest that heparanase is a member of the clan A glycosyl hydrolases and has a common catalytic mechanism that involves two conserved acidic residues, a putative proton donor at Glu225 and a nucleophile at Glu343.

L9 ANSWER 5 OF 5 CANCERLIT
ACCESSION NUMBER: 93696451 CANCERLIT
DOCUMENT NUMBER: 93696451
TITLE: The molecular cloning and characterization of **human heparanase** cDNA and the immunochemical localization of heparanase in metastatic melanomas.
AUTHOR: Jin L
CORPORATE SOURCE: Univ. of Texas H.S.C. at Houston Grad. Sch. of Biomed. Sci.
SOURCE: Diss Abstr Int [B], (1993) 53 (11) 5515.
ISSN: 0419-4217.
DOCUMENT TYPE: (THESIS)
LANGUAGE: English

FILE SEGMENT: Institute for Cell and Developmental Biology
ENTRY MONTH: 199311
ENTRY DATE: Entered STN: 19941107
Last Updated on STN: 19970509

AB Heparanase, an endo-beta-D-glucuronidase, has been associated with melanoma metastasis. Polyclonal antibodies directed against the murine N-terminal heparanase peptide detected a Mr of approx 97,000 protein upon SDS-polyacrylamide gel electrophoresis of mouse melanoma and human melanoma cell lysates. In an indirect immunocytochemical study, metastatic human A375-SM and mouse B16-BL6 melanoma cells were stained with the antiheparanase antibodies. Heparanase antigen was localized in the cytoplasm of permeabilized melanoma cells as well as at the cell surface of unpermeabilized cells. Immunohistochemical staining of frozen sections from syngeneic mouse organs containing micrometastases of B16-BL6 melanoma demonstrated heparanase localized in metastatic melanoma cells, but not in adjacent normal tissues. Similar studies using frozen sections of malignant melanomas resected from patients indicated that heparanase is localized in invading melanoma cells, but not in adjacent connective tissues. Monoclonal antibodies directed against murine heparanase were developed and characterized. Monoclonal antibody 10E5, an IgM, precipitated and inhibited the enzymatic activity of heparanase. A 2.6-kb cDNA was isolated from a human melanoma lambda gt11 cDNA library using the monoclonal antibody 10E5. Heparan sulfate cleavage activity was detected in the lysogen lysates from E coli Y1089 infected with the lambda gt11 cDNA and this activity was inhibited in the presence of 10-fold excess of heparin, a potent inhibitor of heparanase. The nucleotide sequence of the cDNA was determined and insignificant homology was found with the gene sequences currently known. The cDNA hybridized to a 3.2-3.4 kb mRNA in human A375 melanoma, WI-38 fibroblast, and THP-1 leukemia cells using Northern blots. Heparanase expression was examined using Western and Northern blots. In comparison to human A375-P melanoma cells, the quantity of 97,000 protein recognized by the polyclonal anti-heparanase antibodies doubled in the metastatic **variant** A375-SM cells and the quantity of 3.2-3.4 kb mRNA doubled in A375MetMix, a metastatic **variant** similar to A375-SM cells. In B16 murine melanoma cell, the intensity of the 97,000 protein increased more than 2 times comparing with B16-F1 cells. The extent in the increase of the protein and the mRNA levels is comparable to the change of heparanase activity observed in those cells. In summary, the studies suggest that (a) the N-terminus of the heparanase molecule in mouse and human is antigenically related; (b) heparanase antigens are localized at the cell surface and in the cytoplasm of metastatic human and mouse melanoma cells; (c) heparanase antigens are localized in invasive and metastatic murine and human melanomas in vivo, but not in adjacent normal tissues; (d) heparanase molecule appeared to be differentially expressed at the transcriptional as well as at the translational level; and (e) the size of **human heparanase** mRNA is 3.2-3.4 kb. (Full text available from University Microfilms International, Ann Arbor, MI, as Order No. AAD93-07237)

=> d l7 ibib ab 1-2

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:51645 CAPLUS
DOCUMENT NUMBER: 136:97379
TITLE: Protein and cDNA sequences of a second **human heparanase**, and splice variants thereof, with a predominant expression in skeletal muscle, heart and pancreas
INVENTOR(S): David, Guido; Duerr, Joachim
PATENT ASSIGNEE(S): Vlaams Interuniversitair Instituut voor Biotechnologie Vzw, Belg.
SOURCE: PCT Int. Appl., 54 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004645	A2	20020117	WO 2001-EP8094	20010712
WO 2002004645	A3	20021017		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: EP 2000-202442 A 20000712

AB The present invention provides a novel human protein and its splicing variants, which has heparanase activity. The present invention relates to the field of carbohydrates and more specifically to the field of heparan sulfate proteoglycans. Several splice variants of said gene have been identified with a specific expression pattern in skeletal muscle, heart and pancreas.

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:229058 CAPLUS
DOCUMENT NUMBER: 134:262849
TITLE: **Human heparanase-2**, its sequence, recombinant production, and use in identifying potential antagonists and/or agonists
INVENTOR(S): Duecker, Klaus; Sirrenberg, Christian
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001021814	A1	20010329	WO 2000-EP8837	20000911
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1214423	A1	20020619	EP 2000-958531	20000911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2003510053	T2	20030318	JP 2001-525372	20000911

PRIORITY APPLN. INFO.: EP 1999-118805 A 19990923
EP 2000-114649 A 20000707
WO 2000-EP8837 W 20000911

AB The invention provides a cDNA mol. encoding a human protein believed to be **heparanase-2**, based on sequence homol. to known heparanases. The invention also provides polynucleotides that contain fragments of said cDNA mols. that can be used as hybridization probes or as primers for nucleic acid amplification. The invention further provides expression vectors comprising said cDNA mols., host cells transformed with said vectors for the recombinant prodn. of **human heparanase-2**. Still further, the invention provides for the use of said **human heparanase-2**

polypeptides in identifying compds. that may be antagonists and/or agonists, which may be potentially useful in therapy. Finally, the invention provides a fusion protein consisting of said **heparanase -2** fused to a Ig Fc region, and antibodies specific for **heparanase-2**. The cDNA sequence, as well as the corresponding amino acid sequence of **human heparanase-2** are claimed. The invention used reverse transcription-polymerase chain reaction (RT-PCR) to show the expression of **heparanase-2** gene in various tissues and tumors, and showed the expression of **heparanase-2** in transformed 293 human kidney fibroblasts.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

WEST

Generate Collection | Print

Search Results - Record(s) 1 through 4 of 4 returned.

1. Document ID: US 20030083254 A1

L2: Entry 1 of 4 File: PGPB May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030083254
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030083254 A1

TITLE: Substances

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
McKenzie, Edward Alexander	Abingdon		GB	
Stamps, Alasdair Craig	Abingdon		GB	
Terrett, Jonathan Alexander	Abingdon		GB	
Tyson, Kerry Louise	Abingdon		GB	

US-CL-CURRENT: 514/12; 530/324

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

2. Document ID: US 20020064853 A1

L2: Entry 2 of 4 File: PGPB May 30, 2002

PGPUB-DOCUMENT-NUMBER: 20020064853
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020064853 A1

TITLE: Heparanase II, a novel human heparanase paralog

PUBLICATION-DATE: May 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Heinrikson, Robert Leroy	Plainwell	MI	US	
Bienkowski, Michael Jerome	Portage	MI	US	

US-CL-CURRENT: 435/200; 435/18, 435/325, 435/69.1, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

3. Document ID: US 6387643 B1

L2: Entry 3 of 4 File: USPT May 14, 2002

US-PAT-NO: 6387643
DOCUMENT-IDENTIFIER: US 6387643 B1
**** See image for Certificate of Correction ****

TITLE: Human platelet heparanase polypeptides, polynucleotide molecules that encode them, and methods for the identification of compounds that alter heparanase activity

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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4. Document ID: EP 1276862 A2 WO 200181569 A2 AU 200151278 A US 20020064853 A1

L2: Entry 4 of 4 File: DWPI Jan 22, 2003

DERWENT-ACC-NO: 2002-041402
DERWENT-WEEK: 200308

TITLE: Novel heparanase II polypeptide useful for identifying agents with alter heparanase activity and for accelerating wound healing, blocking angiogenesis or inflammation

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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Terms	Documents
L1 same (heparanase-2 or heparanase II or splice variant or homolog)	4

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L1 same (heparanase-2 or heparanase II or splice variant or homolog)	4

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

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L2	L1 same (heparanase-2 or heparanase II or splice variant or homolog)	4	L2
L1	human heparanase	50	L1

END OF SEARCH HISTORY